ENVIRONMENTAL ASSESSMENT

for

COW CREEK WATERSHED PROJECT 2002

EA # OR-118-02-012
May 21, 2002

Proposed agency actions: Replacement of undersized and damaged culverts, stream bank stability and structure replacement

Type of statement:	Environmental Assessment
Lead agency:	U.S. Department of Interior Bureau of Land Management Medford District, Glendale Resource Area

Lynda Boody
Field Manager
Glendale Field Office
Medford District
Bureau of Land Management

CONTENTS

CHAPTER 1 - PURPOSE AND NEED

1.0 PURPOSE AND NEED FOR THE PROPOSAL

The Glendale Resource Area proposes a variety of road maintenance and improvement projects within the Cow Creek watershed on federal, Douglas county and private lands. Projects proposed on private lands include roads used by the BLM through reciprocal right-of-way agreements or road use agreements. The types of projects proposed include replacing damaged and undersized culverts, stream bank stabilization and structure replacement at stream crossings on existing roads. Many of the existing culverts in the Cow Creek watershed do not provide adequate passage for aquatic species and cannot accommodate a 100 year flood event. The proposal is anticipated to be completed in stages over a 5 to 7 year period.

1.2 Project Objectives

The project objectives are to:

- provide stream bank stabilization
- reduce the current and future risk of sedimentation,
- maintain and restore aquatic and fish passage, and
- maintain road access to private, public, and recreation areas.

The related Medford District Resource Management Plan (RMP) objectives are:

- to "Continue to make BLM-administered lands available for needed rights-of-way where consistent with local comprehensive plans, Oregon statewide planning goals and rules, and the exclusion and avoidance areas identified in this RMP" (RMP p. 82)

- to "Develop and maintain a transportation system that serves the needs of users in an environmentally sound manner" (RMP p. 84).

- for restoration and maintenance of aquatic ecosystem as described in the Aquatic Conservation Strategy, which specifies the objectives (RMP pp 22-31).

1.3 Plan Conformance

This proposal is in conformance with the *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl* (ROD), approved April 13, 1994; the *Record of Decision and Resource Management Plan for the Medford District* (RMP), approved June 1995; and the *Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (S&M ROD)*, January 2001.

1.4 Decisions to be made on this Analysis

The Glendale Resource Area Field Manager will:

- Select an alternative.
- Determine whether the selected alternative would have significant effects or not, and whether or not to prepare an environmental impact statement. If the impacts are determined to be insignificant, then a Finding of No Significant Impact (FONSI) may be issued and a decision may be implemented.
- Determine whether the selected alternative is consistent with the Resource Management Plan.

1.5 Relevant Issues

Treatment of anadromous fish culverts

CHAPTER 2 - ALTERNATIVES

2.0 COMPARISON OF THE ALTERNATIVES

This chapter describes the proposed action alternative and additional alternatives including the no action alternative. All roads are under BLM ownership unless noted with asterisk. Descriptions focus on potential actions, outputs, and any related mitigation.

Table 2-1 Proposed Construction for Each Alternative

Stream, Road Number and Culvert location.	Structure	Type of action	Alternatives		
			1	2	3
*1. Russell Creek #1 (Douglas County Road #36) T32S R4W Sec5	culvert w/ temp bypass	replacement or weir at outlet	X	X	
2. Russell Creek #2 #31-4-31 rd. T31S R4W Sec 31	culvert	replacement	X	X	
3. West Fork Russell Creek #32-4-6.1 rd. T32S R4W Sec6	culvert	replacement	X	X	
4. Whitehorse Creek #2 #32-4-4 rd. T32S R4W Sec15	culvert w/ temp bypass	replacement	X	X	
5. Whitehorse Creek #3 #32-4-22 rd. T32S R4W Sec22	culvert	replacement	X	X	
6. Whitehorse Creek #4 #32-4-22.1 rd. T32S R4W Sec22	culvert	replacement or weir at outlet	X	X	
7. Blackhorse Creek #2 #32-4-15 rd. T32S R4W Sec15	culvert	replacement	X	X	
8. Fizzleout Creek #32-4-21.1 rd. T32S R4W Sec21	culvert	removal	X	X	
9. Fizzleout Creek #32-4-21 rd. T32S R4W Sec21	culvert w/ temp bypass	replacement	X	X	
10. Wildcat Creek #32-5-23 rd. T32S R5W Sec14	culvert	replacement	X	X	
11. Quines Creek #3 #32-5-35.2 rd. T32S R5W Sec35	culvert w/ temp bypass	replacement	X	X	

Stream, Road Number and Culvert location.	Structure	Type of action	Alternatives		
			1	2	3
12. Quines Creek #4 #32-5-35.2 rd. T32S R5W Sec01	culvert	replacement	X	X	
*13. Totten Creek #2 #32-6-33 T32S R6W Sec 31 NWNW	culvert	replacement	X	X	
*14. Totten Creek #3 #32-6-31 T32S R7W Sec 25 SENE	culvert	replacement	X	X	
15. Woodford Creek #2 #32-5-30 rd. At county or state gravel pile. T32S R5W Sec30	culvert w/ temp bypass	replacement	X	X	
*16. Bear Creek #32-5-18 rd. State road off Windy Creek. T32S R6W Sec12	culvert	replacement	X	X	
17. Snow Creek Tributary #32-3-5 T32SR3W Sec 8/17 border	culvert w/ temp bypass	replacement	X		
18. McGinnis Creek #31-4-27.3	culvert	replacement	X	X	
19. Gold Mountain Creek Road (Fish hook) drainage #31-9-22,#31-9-21.1	Non-fisheries culverts and cross drains, approx. 2 miles	Replacement and drainage enhancement, road prism stabilization	X	X	
*20. McCullough #1 Douglas County Road #27 T32S R6W Sec31	culvert w/ temp bypass	improve by creating boulder cascade	X	X	
*21. McCullough #2 Superior Lumber Company haul road. T32S R6W Sec31	culvert	replacement	X	X	
*22. McCullough #5 State haul road. #32-6-17 rd. T32S R6W Sec17	culvert	replacement	X	X	
*23. Totten Creek #1 Douglas County Road #27 T32S R6W Sec31	culvert w/ temp bypass	replacement	X	X	
*24. Rattlesnake #1 Douglas County Road #177 T33S R7W Sec2	culvert w/ temp bypass	replacement	X	X	

Stream, Road Number and Culvert location.	Structure	Type of action	Alternatives		
			1	2	3
25. Rattlesnake #2 #33-7-11 rd. T33S R7W Sec11	culvert	weir at outlet	X	X	
26. Stevens Creek #1 #33-7-2.1 rd. T33S R7W Sec2	culvert	replacement	X	X	
*27. Panther Butte Creek Douglas County Road #27 T33S R7W Sec2	culvert w/ temp bypass	replacement	X	X	
*28. Marion Creek Private T32S R7W Sec33.	culvert	replacement	X	X	
29. Rattail Creek #33-7-2 rd. T32S R7W Sec19	culvert w/ temp bypass	replacement	X	X	
30. Skull Creek immediately above Cow Creek Road Crossing. T32S R7W Sec19	problem: unstable streambanks due to channel down-cutting	add boulders and smaller rock to restore channel elevation and stream bank stability	X	X	
*31. Skull Creek #2 #32-8-36 rd. T32S R7W Sec 30 SWSW . Superior Lumber Company	log stringer bridge	replacement with aquatic friendly crossing	X	X	
32. Bonnie Creek #3 #32-8-35.3 rd. near road 35.2 T32S R8W Sec35	2 culverts	replacement	X	X	
33. Bonnie Creek #4 #32-8-35.3 rd. near road 35.2 T32S R8W Sec35	culvert	replacement	X	X	
34. Elk Valley Creek Tributary #31-8-31 rd. T31S R8W Sec13	culvert w/ temp bypass	replacement	X	X	
35. Stanley Creek #31-9-19 rd. T31S R9W Sec19	culvert	replacement or removal	X	X	
36. Wallace Creek #31-9-33.1 rd. T31S R9W Sec33	culvert	replacement	X	X	
*37. Fortune Branch Creek Douglas County Road #12. T32S R5W Sec20	culvert w/ temp bypass	replacement	X	X	
38. Snow Creek #1 #32-3-7 rd. T32S R3W Sec07	culvert	replacement	X		

Stream, Road Number and Culvert location.	Structure	Type of action	Alternatives		
			1	2	3
39. Snow Creek tributary #32-3-7.3 rd. T32S R3W Sec07	culvert	replacement	X		
40. Snow Creek #2 #32-3-5 rd. T32S R3W Sec17	culvert w/ temp bypass	replacement	X		
41. Snow Creek #3 #32-3-5 rd. T32S R3W Sec19	culvert w/ temp bypass	replacement	X		
42. Snow Creek #4 #32-3-19.4 rd. T32S R3W Sec19	culvert	replacement	X		
*43. Meadow Creek Douglas County Road T31S R3W Sec31	culvert w/ temp bypass	replacement	X		
*44. Sugar Creek #1 Douglas County Road T31S R3W Sec31	culvert w/ temp bypass	replacement	X		
45. Cow Creek and West Fork Cow Creek Road Culvert replacement and drainage enhancement.	Non-fisheries culverts	replacement and additional cross drain structures approx 30 miles	X	X	
46. Panther Creek Road Renovation #31-9-27, #31-9-22	Non-fisheries culverts and cross drains	replacement and drainage enhancement approx 2.5 miles	X	X	

*** Private, State or County roads.**

2.1 Alternative 1: Proposed Action

Alternative 1 proposes to improve fish passage, provide access to private land and stabilize stream banks. The specific projects are listed in Table 2-1. In addition to work on fish bearing streams, this alternative also includes replacement of cross drains and culverts on non-fish bearing streams along approximately 32 miles of existing main roads.

2.1.1 Project Design Features

Project Design Features (PDFs) are specific measures included in the design of the proposed action to minimize negative impacts on the human environment. Many project design features for projects in the Medford District are specified in the RMP under Best Management Practices (BMP) as described in Appendix D of the RMP (RMP pp 152-165).

The instream work period will conform to Oregon Department of Fish and Wildlife (ODFW)

requirements and will be done between July 1 and September 15. Waivers to work outside this period shall be reviewed on a site specific basis with involvement of ODFW and the resource area fish biologist and/or hydrologist. These dates apply to any intermittent or perennial stream as defined by the Northwest Forest Plan (ROD B-14).

Approaches to all stream crossings would be as near a right angle to the stream as possible to minimize disturbance to streambanks and riparian habitat.

Road crossings on all fish-bearing streams would be designed to maintain natural streambed substrate and site gradient, while minimizing long-term maintenance needs.

Width of a crossing structure would be at least as wide as the mean bankfull width at the crossing site; to be measured by the resource area fish biologist or hydrologist.

Where practical, fish-bearing and non-bearing streams would be diverted around the work area in a manner (e.g. pipe or lined ditch) that would minimize stream sedimentation. The diverted stream would not be returned to the channel until all instream work has been completed.

Waste stockpile and borrow sites would be located at least one site potential tree length from a stream where sediment-laden runoff can be confined unless there is no way for sediment to move off-site. Using existing sites or creating new ones in Riparian Reserves must be consistent with the ACS Objectives of the (ROD B-11).

When designing a temporary stream crossing, the following materials may be used: (a) 1 to 3 inch diameter washed, uncrushed river rock as fill over the culvert (the gravel size will provide good spawning substrate for steelhead and salmon after the pipe is removed). One inch minus aggregate and soil are unacceptable fill material around a temporary culvert (b) geotextile fabric over the river rock , and (c) surface aggregate when needed. Surface aggregate would be removed from the channel before pulling the culvert and disposed of properly so that fines will not enter the stream.

After a temporary culvert crossing is removed, river rock would be left in the streambed and breeched with a blade to allow free movement of water.

When removing a culvert and not replacing it, the slopes would be at least 1.5:1 and more if necessary on highly erosive soils, to minimize sloughing, erosion and potential for the stream to undercut streambanks during periods of high streamflow.

Bare soil areas would be mulched with hydro-seeding, weed-free straw, or bark chips, etc and native seed or other approved seed mix during fall to discourage invasion of noxious plant species and to retard soil erosion.

Straw bales, geotextile fabric, coconut fiber logs/bales or absorbent pads would be placed immediately downstream of the work area in order to reduce movement of sediment and petroleum based products from the project site.

Wet (fresh enough to flow) or green (hardened but less than 21 days old) cement, would not be allowed to enter a stream. This includes water used to clean tools and wash out cement trucks after delivering material.

Heavy equipment would be cleaned before moving onto the project site in order to remove oil and grease, noxious weeds and excessive soil.

Hydraulic fluid and fuel lines on heavy mechanized equipment must be in proper working condition in order to minimize leakage into streams.

Waste diesel, oil, hydraulic fluid and other hazardous materials and contaminated soil near the stream should be removed from the site and disposed of in accordance with DEQ regulations. Areas that have been saturated with toxic materials would be excavated by to a depth of 12 inches beyond the contaminated material.

Some riparian vegetation may have to be cut to ensure equipment operator safety to allow heavy equipment to access the stream channel or riparian zone so that it can do streambank stabilization work, prepare the site for culvert replacement or construct a temporary bypass road. The amount of vegetation that is cut would be the absolute minimum that is needed to accomplish the primary task. Any trees that are cut would be placed in the channel following construction to improve stream habitat.

Existing skid roads or other access roads would be used to get equipment into the stream whenever possible.

Vehicle traffic past individual work sites would be maintained whenever possible by constructing temporary bypass roads. Bypasses would consist of small, one-lane road beds, adjacent to the project, with a small culvert to accommodate the smaller summer flows. They would be temporary and stream bottoms would be restored upon completion of the project

Equipment containing toxic fluids should not be stored in a stream channel anytime.

If an active spotted owl nest or activity center is located within or adjacent to a project site, the project activity will be restricted from March 1 through September 30, or until a resource area biologist determines that young are not present.

Work activities producing loud noises above ambient levels will not occur within .25 miles of any spotted owl nest site or activity center of known pairs and resident singles between March 1 and June 30, or 2 weeks after the fledgling period, as determined by a Glendale Resource Area biologist.

In marbled murrelet survey areas A and B, work activities producing loud noises above ambient levels will not occur within .25 miles of any occupied marbled murrelet stand or unsurveyed suitable habitat between April 1 and August 5. For the period between August 6 and September 15, work activities will be confined to between 2 hours after sunrise to 2 hours before sunset.

Within .25 miles of any occupied marbled murrelet stands or unsurveyed suitable habitat, daily clean up litter and debris around project sites.

Work would be temporarily suspended if rainstorms saturate soils to the extent that there is potential for road damage.

Cutting vegetation on road fill slopes would be minimized in order to maintain slope stability.

Any changes to the selected alternative during project construction would be fully analyzed, per NEPA, by the interdisciplinary team and submitted to the Field Manager for a decision prior to such activity being approved.

2.2 Alternative 2 : No stream work above Galesville dam

Alternative 2 emphasizes improving anadromous fish passage. This alternative is similar to alternative 1 except that no fisheries culverts would be replaced above Galesville Reservoir. Galesville Reservoir effectively prevents anadromous fish from migrating upstream on Cow Creek. The stream bank stabilization project on Skull Creek would be implemented, as would road drainage improvement projects along Cow Creek, West Fork Cow Creek, Panther Creek and Gold Mountain Creek.

2.2.1 Project Design Features

The Project Design Features listed under Alternative 1 would apply to Alternative 2.

2.3 Alternative 3: No Action

The proposal would not be implemented under the No Action alternative. Routine maintenance activities would continue to occur including grading and cleaning of ditch lines and existing culverts. The standard and guidelines identified in the RMP would continue to be applied.

CHAPTER 3 - AFFECTED ENVIRONMENT

3.0 AFFECTED ENVIRONMENT

This section describes relevant resource components of the existing (baseline) environment.

The location of the proposed action is:

Umpqua River Basin
Analytical watersheds (fifth field): Upper Cow Creek, Middle Cow Creek, and West Fork Cow Creek
County: Douglas
Legal description: See general location map and Table 2-1 for detailed location and description.

The Cow Creek analysis area encompasses the Upper, Middle and West Fork Cow Creek 5th field watersheds in Douglas County, Oregon. It is located approximately 25 miles north of Grants Pass, Oregon and is bisected by Interstate 5. The analysis area contains an intermingling of federal lands and non-federal lands in a checkerboard pattern characteristic of much of the Oregon and California (O&C) railroad lands of western Oregon. Most of the BLM administered lands are situated in the higher elevations. BLM records indicate that there are approximately 1,647 miles of roads within the analysis area with numerous stream crossings. Many of these stream crossings impair or completely block passage of aquatic species, including fish, and cannot accommodate a 100 year flood event. These crossings include Douglas County roads, Oregon State roads and privately owned roads. Several culverts have been identified as being structurally defective or rusted out. These rusted and/or defective culverts constitute a safety problem for hauling of materials and to the general public if they were to fail.

3.1 Water Quality, Riparian Areas

Some of the potentially affected streams have been listed as water quality limited (Clean Water Act, section 303d) for temperatures during the summer period. These streams include Whitehorse, Windy, Dads, Fortune Branch, Quines , Riffle, Skull, Woodford, Cow, West Fork Cow, Elk Valley, Slide, Snow and Dismal Creeks. These water quality limited streams can be found on the Oregon Department of Environmental Quality website www.deq.state.or.us/wq/303dlist/303dpage.htm. Riparian vegetation on BLM administered land has been recovering from previous harvesting decades ago and wild land fires, such as the Wood Creek fire. Most of the streams on BLM administered lands are small and narrow reducing the canopy height necessary for effective stream shading.

All fish habitat in the planning area is functioning at risk or not properly functioning (NMFS 1996) for a number of reasons including: culverts that are barriers or impediments to migration, high summer water temperature, inadequate large wood in the channel, excessive sedimentation and less than optimal riparian conditions.

3.2 Threatened and Endangered Species

There are 56 known spotted owl sites in the planning area and eight these sites are within 1/4 mile of proposed project locations. There are four spotted owl critical habitat units (CHUs) that might be affected. These four spotted owl CHUs include OR-32, OR-64, OR-62, OR-67. One marbled murrelet critical habitat area might be affected. One bald eagle site is known to inhabit the area. Anadromous and resident fish inhabit about 240 miles of stream in the project area. Oregon Coast coho salmon, an ESA-listed Threatened species, uses 100 miles for migration, spawning and rearing.

3.3 Survey and Manage Species

Survey and Manage and Special Status Species are known to be present in the analysis area as determined through recent surveys on planned timber sales. However, no known sites are within existing road prisms or stream crossings where activities are planned.

3.4 Noxious Weeds

Noxious weeds are prevalent along all roads within the watershed. Species such as meadow knapweed, Klamath weed and Scotch broom are present and well as blackberry species that have crowded out native species particularly in disturbed areas.

CHAPTER 4 - ENVIRONMENTAL CONSEQUENCES

4.0 ENVIRONMENTAL CONSEQUENCES

This chapter provides the scientific and analytic basis for the comparisons of the alternatives. The probable consequences of each alternatives on critical elements and relevant environmental issues are also described.

Table 4.1 Critical Elements by Alternative The following elements of the human environment are subject to requirements specified in statute, regulation, or executive order and must be considered in all EA's. (Y=yes N=no)

Resource or Issue Affected by Alternative	Alternative (Y or N)			Resource Affected by Alternative	Alternative (Y or N)		
	1	2	3		1	2	3
Air Quality	N	N	N	Threatened & Endangered Species	**Y**	**Y**	**N**
ACEC	**N**	**N**	**N**	Wastes, Hazardous/Solid	**N**	**N**	**N**
Cultural	**N**	**N**	**N**	Water Quality	**Y**	**Y**	**N**
Farmlands, Prime/Unique	**N**	**N**	**N**	Riparian Zones	**Y**	**Y**	**N**
Floodplains	**N**	**N**	**N**	Wild & Scenic Rivers	**N**	**N**	**N**
Native American Religious Concerns	**N**	**N**	**N**	Wilderness	**N**	**N**	**N**
Invasive Species	**Y**	**Y**	**N**	Environmental Justice	**N**	**N**	**N**
Energy	**N**	**N**	**N**				

Other Elements	Alternatives Affected (Y or N) 1	2	3
Survey and Manage and Special Status Species	N	N	**N**

4.1 Direct and Indirect Effects of Alternative 1: Proposed Action

4.1.1 Effects on Water Quality, Riparian Areas

The Oregon Department of Environmental Quality has identified Cow Creek, the West Fork Cow Creek, and several tributaries to both of these streams as being water quality limited for temperature. The proposed replacement or improvement activities are located at the intersection of road and stream crossings and the removal of minor amounts of shade would not affect stream temperatures. Installation of new or replacement cross drains would likely result in some sediment movement during the first rains of the years but would diminish after that first flush.

Replacing culverts that are barriers or impediments to fish migration would also restore aquatic connectivity for all other aquatic species. Replacing culverts on some non-BLM roads under reciprocal road use agreement would restore access for fish and other aquatic species to BLM lands upstream.

A small amount of soil would likely enter the stream if a ramp must be built to allow heavy mechanized equipment (e.g. excavator) to access the stream channel where it would prepare the streambed and channel for culvert installation. Some stream sedimentation would also occur during construction of any temporary by-pass road that may be needed to maintain traffic flow. As mentioned in the PDFs (EA pp. 7,8 and 9) all instream work would be restricted to the ODFW-recommended low water instream work period. Subsurface streamflow generally prevents a culvert work site from being completely dewatered while construction is in progress. Some turbid water would affect aquatic life immediately downstream of the workaday. It is also likely that streamflow during the first major fall rainstorm would transport loose soil from around the completed culvert installation and deposit it downstream. The proposed PDFs (EA pp 8-10) would limit the amount of fine sediment entering streams. However, where there is sediment deposition and turbidity, it could impair respiration and feeding success of juvenile coho salmon, steelhead, cutthroat trout and other aquatic species for several days while culverts are being replaced. Turbid water and sedimentation would also adversely affect sediment-intolerant aquatic insects and primary production in a limited area immediately down stream of the construction site. More mobile species, like fish, may temporarily abandon the area affected by any sediment plume. However, these effects would be short term and diminish within a short distance (e.g.100 yards) downstream of each work site. Predisturbance sediment conditions would return within a year of project completion.

Several log weirs in Skull Creek, adjacent to and immediately upstream of the proposed streambank stabilization project, impede movement of juvenile fish upstream. To correct this situation several of the log structures would be partially breached, lowering elevation of one end of each log. This would improve fish passage and also allow winter streamflow to flush some gravel and sediment that has accumulated behind each log downstream. The gravel and sediment, in conjunction with large boulders that would be placed in the channel as part of the streambank stabilization project, would help to raise streambed elevation and improve streambank stability.

Effects of sediment movement and deposition caused by partially breaching log weirs on Skull Creek would be the same as for culvert replacement. Although breaching would reduce pool volume somewhat, habitat diversity in the bank stabilization area, which is currently bedrock, would substantially improve.

4.1.2 Effects on Threatened and Endangered Species

Southern Oregon/Northern California coho salmon

As mentioned in 4.1.1 above, sediment deposition and turbidity could impair respiration and

feeding success of juvenile coho salmon for several days while culverts are being replaced. However, effects are considered minor and would be consistent with the National Marine Fisheries Service (NMFS) July 12, 2001 Programmatic Biological and Conference Opinion for aquatic and riparian habitat projects and for road maintenance.

Bald Eagle

There are no activities planned near the bald eagle nesting site.

Northern Spotted Owl

Eight culvert replacement projects (# 1,2,3,4,5,6,7,8,9,11,41,42,45) would occur within the Critical Habitat Unit (CHU) OR-32, one project (#25) in CHU OR-64, two projects (#29,30) in CHU OR-62, and one project (#36) in CHU OR-67. No significant impact would be expected to occur to terrestrial habitat from these projects, as impacts would be confined to the existing road area and adjacent culvert area.

Eight projects (# 8,11,22,31,33,36,38,39) would occur within ¼ mile of know spotted owl sites. Activity would be restricted from March 1 – June 30, or until the area biologist has determined the owls are not nesting or young have fledged. No suitable owl habitat would be removed.

Marbled Murrelet

Two projects (#35,36) would occur in a marbled murrelet critical habitat unit. No significant impact would be expected to occur to terrestrial habitat from these projects, as impacts would be confined to existing road area and adjacent culvert area. Project activity occurring between May 1 and September 15 would be restricted to two hours after sunrise to two hours before sunset.

4.1.3 Effects on Survey and Manage Species

Negative impacts are not anticipated for survey and manage wildlife species under alternative 1. There would be no removal of suitable red tree vole habitat. Some soil disturbance and damage to small diameter hardwoods and deciduous trees may occur in the construction of temporary stream diversions. General site conditions would remain suitable for mollusk species found in the project area, and negative impacts to key habitat features (deep talus, rock outcrops) suitable for the Oregon shoulderband snail (the only S&M mollusk likely to occur) are not anticipated. Concrete structures used in bridge construction often create habitat used by mollusk species and can benefit mollusks.

4.1.4 Noxious Weeds

Implementing project design features, such as cleaning heavy equipment before moving onto the project site to remove noxious weeds, would keep spread to a minimum and there would be no significant effect.

.

4.1.5 Cumulative Effects

The following actions have either occurred relatively recently or are anticipated within the foreseeable future:

Fortune Branch #2 culvert replaced 1997
Fortune Branch #3 culvert replaced 1996
Fortune Branch #4 culvert replaced 1996
Skull Creek Culvert 1996
Twin Culvert East Fork Elk Valley Creek 1997
Twin Culvert Elk Valley Creek #2 1998
East Fork Elk Valley Creek culvert replaced 2001
Bonnie Creek Culvert 1997
Quines Creek Fisheries project 1986
Bull Run Fisheries Project 1983
Rattlesnake Fisheries Project 1987
Walker Creek Fisheries project 1983
Skull Creek Fisheries project 1986
East Fork Elk Valley Fisheries project 1982
Key Elk Timber Sale (sold but not awarded)
Mr. Wilson Timber Sale 2002
Bear Pen Timber Sale 2003
Soukow Timber Sale 2002
Bonnie and Slyde Timber Sale (sold but not awarded)
Wildcat Thin Timber Sale (sold but not awarded)
Cottonsnake Timber Sale (2003)
Willy Slide (2003)
Papa Cow (2003)

When the effects of the Proposed Action are added to the environmental baseline and cumulative effects of the above mentioned projects within the 5th field watershed, no cumulative effects were identified. Restoring of historic fish habitat access would have an overall beneficial cumulative effect. The project meets Standards and Guidelines of the Northwest Forest Plan and is consistent with the Aquatic Conservation Strategy and Watershed Analyses in the project area.

4.2 Direct and Indirect Effects of Alternative 2

4.2.1 Effects on Water Quality, Riparian Areas

The effects of replacing or improving culverts in fisheries streams would be the same as mentioned above in the Proposed Action. Galesville Reservoir effectively prevents anadromous fish passage and therefore there would be no effects to anadromous fish above the reservoir. However, resident fish above the reservoir would not benefit from stream crossing work as in alternative 1. Barriers to upstream movement would continue to affect resident fish with the

possibility that conditions could degrade further. By not replacing the culverts in non fisheries streams until they fail, other aquatic organisms, such as aquatic mollusks or salamanders, would still have restricted access upstream. If a culvert in a non fisheries stream failed, the large quantity of sediment that enters the stream would affect fish habitat downstream of that site; such as the confluence with a fish bearing stream.

4.2.2 Effects on Threatened and Endangered Species

Southern Oregon/Northern California coho salmon
The project as planned would be consistent with the NMFS July 12, 2001 Programmatic Biological and Conference Opinion for aquatic and riparian habitat projects and for road maintenance.

Bald Eagle

There are no activities planned near the bald eagle nesting site.

Northern Spotted Owl
No impacts would be anticipated. may be temporarily delayed while work is in progress.

4.2.3 Effects on Survey and Manage Species

Negative impacts are not anticipated for survey and manage wildlife species under alternative 2. No removal of suitable red tree vole habitat would occur. Some soil disturbance and damage to small diameter hardwoods and deciduous trees may occur in the construction of temporary stream diversions. General site conditions would remain suitable for mollusk species found in the project area, and negative impacts to key habitat features (deep talus, rock outcrops) suitable for the Oregon shoulderband snail (the only S&M mollusk likely to be present) would probably not occur. Concrete structures used in bridge construction often create habitat used by mollusk species and can benefit mollusks.

4.2.4 Noxious Weeds

Same as alternative 1

4.2.5 Cumulative Effects

Same as alternative 1.

.

4.3 Alternative 3: No Action

The same projects noted in 4.1 were also used to assess cumulative effects for the no action alternative. No cumulative effects were identified.

4.3.1 Effects on Water Quality, Riparian Areas

The threat of culvert failure and subsequent release of large amounts of fill materials into streams would still be present. The stream bank stabilization on Skull Creek would not occur resulting in probable continued down cutting of stream channel and down stream sedimentation.

In the event of a structure failure, some mortality to aquatic wildlife could occur from siltation, and would likely be greater than the action alternatives, as failure could occur during peak flows and siltation could be greater. Aquatic dependent amphibians would be affected similarly to fish species.

4.3.2 Effects on Threatened and Endangered Species

Southern Oregon/Northern California coho salmon
No action may lead to continued or increased risk of deteriorated habitat as described under 4.3. Beneficial long term effects of restoring aquatic connectivity would not occur through no action. In addition, culverts would continue to block or restrict upstream movement of fish and other aquatic species. The No Action alternative would continue to cause an adverse effect on aquatic habitat and species dependent on it.

Bald Eagle
No impacts would be anticipated.

Northern Spotted Owl
No impacts would be anticipated**.**

4.3.3 Effects on Survey and Manage Species

No impacts would be anticipated**.**
.

4.3.4 Noxious Weeds

No impacts would be anticipated**.**

4.3.5 Cumulative Effects

No impacts would be anticipated**.**
.

CHAPTER 5 - PERSONS AND AGENCIES CONSULTED

5.0. PERSONS AND AGENCIES CONSULTED

A legal notice will be placed in local newspapers to announce to the public that the Glendale Resource Area is requesting public comments on the proposed management action. In addition, notification of this proposal will be sent to the Oregon Department of Fish and Wildlife, the Oregon Dept. of Forestry, county commissioners for the affected county, several environmental groups, and representatives of the timber industry to request their comments. These announcements will be made following completion of this environmental assessment and before a decision is made. The Field Manager will consider all input before reaching a finding or making a decision concerning this proposal.

5.1 Applicable Required Coordination

The project as planned is consistent with the NMFS July 12, 2001 Programmatic Biological and Conference Opinion for aquatic and riparian habitat projects and for road maintenance.

The proposal is consistent with the United States Fish and Wildlife Service (USFWS) Biological Opinion, October 12, 2001

5.2 List of Preparers

Name	Title	Primary Responsibility
Randall Fiske	Engineer	Engineering
Bob Bessey	Fisheries Biologist	Fisheries
Loren Wittenberg	Hydrologist	Soils/Air/Water
Marlin Pose	Wildlife Biologist	Wildlife
Martin Lew	Ecosystem Planner	NEPA Compliance
Douglas Goldenberg	Botanist	Plants and Fungi
Vince Randall	Forester	Native American Concerns
Deston Russell	Engineer Tech	Hazmat

The Proposed Action has been screened for compliance with the Endangered Species Act, The American Indian Religious Freedom Act, Historic Preservation Act, Bureau of Land Management policies related to the ecosystem objectives and concepts in the Medford District Resource Management Plan (RMP) and with the Aquatic Conservation Strategy of the Northwest Forest Plan.

Ecosystem Planner
Reviewed for format and consistency

5/21/02
Date

REFERENCES

USDI-BLM. 1995. Record of Decision and Resource Management Plan. Medford, Oregon

USDA-FS, USDI-BLM. 1994. Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl. Pacific Northwest

USDA-FS, USDI-BLM. 2001. Final Supplemental Environmental Impact Statement to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines. Portland, Oregon

National Marine Fisheries Service. 2001. Endangered Species Act - Section 7 Consultation and Magnuson-Stevens Act Essential Fish Habitat Consultation. Programmatic Biological and Conference Opinion. Bureau of Land Management, Forest Service and BIA/Coquille Indian Tribe Programmatic Activities Affecting SONC Coho salmon, OC Coho salmon and OC Steelhead. July 12, 2001. OSB2001-0070-PC

National Marine Fisheries Service. 1996. Making Endangered Species Act Determinations of Effect for Individual or Grouped Actions at the Watershed Scale. Prepared by the National Marine Fisheries Service, Environmental Technical Services Division, Habitat Conservation Program. August 2001.

National Marine Fisheries Service. 1997. Endangered Species Act - Section 7 Consultation. Biological and Conference Opinion. Implementation of Land and Resource Management Plans (USFS) and Resource Management Plans (BLM). USDA Forest Service: Rogue River, Siskiyou, Siuslaw, Umpqua and Winema National Forests. USDI Bureau of Land Management: Coos Bay, Eugene, Medford, Roseburg and Salem Districts. March 18, 1997